

B3 dispersed in the outer layer comprise particles that have have an aspect ratio of at least 10 in two randomly selectable directions.

B4 Claim 5 (twice amended). The multilayer film of Claim 4 wherein the particles dispersed in the outer layer are sheet silicates.

B5 Claim 7 (twice amended). The multilayer film of Claim 1 wherein said multilayer film has an at least monolayer heat-sealable coating on that side of the multilayer film remote from the outer polyamide layer.

REMARKS

This application pertains to a novel flexible, multilayer film having an outer layer composed of polyamide 6 which contains between 0.1 and 3.0% of a nanodisperse nucleating agent and at least one further polyamide layer.

Claims 1-12 are pending.

Claims 2-6, 8 and 10 stand provisionally rejected for obviousness-type double patenting over claims 2-6, 8 and 15 of copending Application No. 09/807,294. This rejection is believed obviated by the accompanying Terminal Disclaimer.

With regard to the potential 102 (e,f or g)/103 rejection over copending

application 09/807,294, Applicants enclose a Declaration of Common Ownership. This is believed to obviate the foregoing potential rejection.

Claims 3 and 4 stand rejected under 35 U.S.C 112, second paragraph, for reasons specifically indicated in the Office Action. The reasons given by the Examiner have been carefully considered, and appropriate amendments made. The amendments are believed to have overcome the rejection, and the rejection should accordingly be withdrawn.

Claims 1-12 stand rejected under 35 U.S.C. 103(a) as obvious over Ramesh in view of Khanna and Mizutani.

Applicants' claims require that the outer polyamide layer contain nanoscale particulate nucleating agents, and that the thickness of the outer polyamide layer be less than 50% of the total thickness of all of the layers containing polyamide.

The Examiner acknowledges that Ramesh does not teach the inclusion of nucleating agents, nor that the outer layer should be less than 50% of the total thickness of all the polyamide layers in the film. The Examiner sees Khanna as disclosing a polyamide polymer which includes a small amount of silica nucleating agent and then the Examiner speculates that such silica nucleating agent includes particles having diameters less than 100 nm. The Examiner has not, however, shown any evidence of this. Obviousness is determined according to what is shown in the prior

art, not on speculation! The fact is, Khanna neither teaches nor suggests anything at all about particle size for his nucleating fillers.

The cooling rate that the Examiner refers to in Mizutani concerns a PET resin, and has nothing to do with polyamide.

The references cited cannot therefore in any way be seen as teaching the inclusion of nanoscale particulate nucleating agents in a outer layer of 90% polyamide 6 or of cooling such a layer from the molten state at a cooling rate of between 10° and 20°C per hour. The rejection of claims Claims 1-12 under 35 U.S.C. 103(a) as obvious over Ramesh in view of Khanna and Mizutani should accordingly now be withdrawn.

The Examiner should also note that the inventive multilayer film demonstrates a very unusual combination of good optical properties and good mechanical resistance.

It should also be pointed out that Ramesh concerns a shrinkable multilayer film which is used for cook-in end use. In order to be shrinkable, the film has to be crosslinked electronically. The inventive film need not be shrinkable because of the optical as well as puncture strength properties.

In Khanna, the improvement of the optical properties of molded polyamide articles is achieved using a polyamide with a reduced content of oligomeric polyamide for the molding process. According to column 9 only optionally conventional nucleating

agent can be added. There is absolutely no suggestion of nanoscale particles.

The same is true of Mizutani, wherein other polymers than polyamides and only the optional addition of conventional nucleating agents are discussed, and there is absolutely no teaching or suggestion of nanoscale particles.

In view of the present remarks it is believed that claims 1-12 are now in condition for allowance. Reconsideration of said claims by the Examiner is respectfully requested and the allowance thereof is courteously solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, Appellants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fee or credit any excess to Deposit Account No. 14-1263.

Respectfully submitted,
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**MARKED-UP COPIES OF AMENDED CLAIMS
SHOWING CHANGES RELATIVE TO PREVIOUS VERSIONS**

Claim 1 (amended). Multilayer film optionally comprising a heat-sealable coating having an outer polyamide layer containing nanoscale particulate nucleating agents and at least one further polyamide layer, [characterized in that, for] wherein the polyamide forming the outer layer[, use] is made of at least 90% polyamide 6[, relative to the total mass of the polyamide in said layer,] and the smallest constituents of the particles dispersed in the outer layer forming a rigid unit in the dispersion having as a number-weighted average of all the constituents a dimension of not more than 100 nm in at least one direction that can be arbitrarily chosen for each constituent [, in that, when the outer layer is cooled from the completely molten state at a cooling rate of between 10° and 20°C per minute,] and wherein crystalline structures [are produced that] originate from the surface of the particles dispersed therein[, in that] and all the further polyamide layers contain the particles contained in the outer layer at a level of not more than one tenth of the proportion by weight of the particles in the outer layer, and [in that] the thickness of the outer layer is less than 50% of the total thickness of all the layers containing polyamide.

Claim 3 (twice amended). The multilayer film of Claim 1 wherein in addition to polyamide 6, the outer layer contains a polyamide selected from the group [comprising] consisting of [polyamide 6,] polyamide 10, polyamide 12, polyamide 66, polyamide 610, polyamide 6I, polyamide 612, polyamide 6/66, polyamide 6I/6T, polyamide MXD6,

polyamide 6/6I, polyamide 6/6T, polyamide 6/IPDI, copolymers of monomers forming said polymers, and [or] mixtures [of said polymers or copolymers] thereof.

Claim 4 (twice amended). The multilayer film of Claim 1, wherein the particles dispersed in the outer layer comprise particles that have [, in two mutually perpendicular directions tghat can be arbitrarily chosen for each particle, a dimension in each case of at least a tenth of the dimension of the particles in the direction with the smallest dimension] have an aspect ratio of at least 10 in two randomly selectable directions.

Claim 5 (twice amended). The multilayer film of Claim [1] 4 wherein the particles dispersed in the outer layer are sheet silicates.

Claim 7 (twice amended). The multilayer film of Claim 1 wherein said multilayer film has an at least monolayer heat-sealable coating on that side of the multilayer film remote from the outer polyamide layer.